CANYON CREEK
WILDLIFE MANAGEMENT AREA
MANAGEMENT PLAN

September 2002

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MANAGEMENT PLAN

Prepared by:
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September 2002

PLAN APPROVAL:

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Date

_____ _____

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Date

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INTRODUCTION

The Canyon Creek Wildlife Management Area (WMA) was purchased by the Montana Department of Fish, Wildlife and Parks (MFWP) in 1996 from John and Nina Baucus of the Sieben Ranch Company. This purchase was part of a complex land transaction that involved not only the Canyon Creek fee title property but also conservation easements on the Sieben-Rattlesnake (10,867 acres), the Sieben-Lyons Creek (4,040 acres) and the O'Connell-Lyons Creek (4,154 acres) properties. (MFWP holds an easement on property in the Yellowstone drainage called Mill Creek, thus this property is referred to here as Canyon Creek, although the local reference is to Mill Creek.)

The primary purpose in acquiring Canyon Creek (2,210 acres) was to protect important wildlife habitats from subdivision and human development when it was divested from the Sieben Ranch Company. In addition, public hunting access to the property and adjacent public lands was an objective. The WMA was purchased for $663,000 from hunting license revenues earmarked by House Bill 526 for the Habitat Montana program.

This Management Plan provides for the needs of wildlife (protect and/or enhance soil, water, vegetation) by addressing terms of road management, and other land use practices, with emphasis on improving wildlife habitat. It is intended that this plan be updated periodically to maintain its value as a flexible working document. Appendices include baseline natural resource inventory including historical and physical descriptions, wildlife survey data, a travel plan, timber management plan, copies of lease agreements, and annual work plans. Unless otherwise noted, strategies described in the following section will be the responsibilities of FWP. Hunter access is provided to both the WMA and adjacent public land. Important hunting access is provided from State Highway 279.

When acquired, the future of the Canyon Creek property was undetermined. While one option was to retain the property and manage it as a wildlife management area, another possibility was to exchange or sell the property with conservation covenants attached in order to maintain wildlife values. The property is currently being managed as a WMA.

GOAL

To conserve and improve the soil and vegetation of the wildlife management area while providing yearlong habitat for elk, upland game birds, small mammals and birds; seasonal habitat for deer, bear, forest carnivores, raptors, endemic and neo-tropical migrant birds; hunting and other recreational opportunities for the public and access to public lands.

This Management Plan provides for the needs of wildlife (protect and/or enhance soil, water, vegetation) by addressing terms of road management, and other land use practices, with emphasis on improving wildlife habitat. Unless otherwise noted, strategies described in the following section will be the responsibilities of FWP. Hunter access is provided to both the WMA and adjacent public land. Important hunting access is provided from State Highway 279.

OBJECTIVES

Objective 1: Maintain and/or improve the wildlife values which exist on the Canyon Creek property by protecting and, where necessary, improving the productivity of soils, water, and vegetation, striving for maximum vegetation diversity dependent on soil types.

Issue Incomplete vegetation analysis and documentation. Canyon Creek WMA has been in state ownership since 1996. Through the Baseline Inventory, vegetation photo plots have been initiated. Gross distribution of habitat types and vegetation baseline information has been collected, but we have a limited understanding of plant composition and potential wildlife forage production.

Strategy Increase our vegetation sampling base to include appropriately selected vegetation transects and possible expansion of photo plots. Explore techniques of estimating forage production at various geographic sites and on areas of differential elk use.

Issue Cattle grazing has resulted in impacts to riparian areas and possibly to grasslands. Prior to 1996, cattle use of the property was heavy and concentrated in riparian zones.

Strategy Remove cattle from the WMA to allow the range and riparian areas to rest and rejuvenate. This will significantly increase the amount of available forage for elk and deer.

Issue Trespass cattle. Boundary fences (except on the south boundary) do not exist and trespass cattle are a re-occurring problem.

Strategy Boundary fencing will be required to realize an effective management plan. Approximately 6 miles of boundary fence would need to be constructed. Prioritize key fence construction needs. Select a fence type that requires minimal maintenance and poses the least hazard to elk and deer. Inspect fences annually and work closely with neighbors on cooperative fence management.

Issue Thermal cover.

Strategy Evaluate the quantity, quality and location of existing thermal cover on the WMA.

Strategy Summer riparian thermal cover is improving with the preemption of cattle use on the WMA.

Strategy Although timber harvest is an option if the property were exchanged/sold, limitations on harvest would be imposed to ensure thermal cover retention, particularly since significant timber harvest has occurred on the area. Cavity nesting bird species would benefit from retention of conifer thermal cover.

Issue Some wildlife values and other potentially unique features in Canyon Creek have not been thoroughly inventoried by FWP.

Strategy If the property were to leave MFWP management, unique features that may exist such as springs, bogs, wallows, raptor nesting sites, hibernacula (bats), and sensitive plant species would be mapped if resources are available.

Issue Wildfire control. A fire suppression agreement with the Montana Department of Natural Resources and Conservation covers the WMA.

Strategy Periodically evaluate the existing written agreement with the Department of Natural Resources and Conservation that provides fire fighting services when needed for wildfires.

Issue Noxious weeds can significantly reduce range quality. Noxious weeds compete with desirable forage plants and create a poor public impression of the WMA. A variety of exotic plants (weeds) have invaded the Canyon Creek property, primarily along roadways. Several are on the state noxious weed list including spotted knapweed, diffuse knapweed, Canada thistle, and Dalmatian toadflax, among others. Surrounding properties have similar exotic plant populations.

Strategy FWP will implement a weed control plan utilizing properly prescribed chemicals on a prioritized basis. Biological agents, mowing, pulling and/or other methods will be researched and utilized where chemical control is inappropriate.

Strategy Limitations on motorized use of the property will be implemented to minimize the introduction and spread of noxious weeds.

Strategy If the property is exchanged/sold, the new landowner will be encouraged to annually evaluate distribution and abundance of weeds and aggressively control them through the use of herbicides, physical removal, biological control, and road management. Herbicides may be applied during the appropriate growth stage using the minimum amounts necessary.

Issue Implementation of conservation terms will require monitoring if the WMA is ever sold or exchanged. Initially, the Canyon Creek property was acquired with the understanding that it might be sold or exchanged in a transaction that would result in no net loss of acres of lands involved in the Habitat Montana Program. Such an exchange/sale would involve placement of conservation terms on the property.

Strategy The purpose in applying conservation terms if the property is ever sold or exchanged, would be to prevent certain land uses that may negatively impact wildlife. FWP will monitor land use on the Canyon Creek property through ground methods and aerial observation (i.e. during big game surveys, aerial photographs, and possibly satellite imagery).

Strategy If leased prior to sale or exchange, FWP will work with the lessee to make sure activities are carried out in a manner prescribed by the lease to assure natural vegetation diversity, riparian health, and soil integrity.

Strategy Some of the major land use restrictions that are designed to protect wildlife values, and may be implemented on the Canyon Creek property include:

- ☐ Sagebrush manipulation or control will be prohibited. Sagebrush is an important native shrub that provides cover, browse, and nesting sites for an abundance of wildlife species and adds to the area's overall habitat diversity.
- ☐ Residential subdivision will be prohibited.
- ☐ Surface disturbance that could result from mineral exploration, development or extraction will be prohibited if subsurface mineral rights are not obtained; otherwise, mineral exploration, development or extraction will not be allowed.
- ☐ Timber harvest would be managed to maintain and provide for wildlife habitat needs; big game summer and winter thermal cover would be emphasized.
- ☐ Crop cultivation will be prohibited. Grass and shrub lands will remain intact.
- ☐ Fences that inhibit wildlife movements, including woven wire fences will not be allowed. Fencing design will meet wildlife needs with the recommendation that the bottom strand of wire should be at least 18" above ground, and the top wire should be no higher than 42".
- ☐ Use of snowmobiles will be prohibited to protect wintering wildlife.

Objective 2: Manage the western portion of hunting district 339 for a wintering population of 600 elk, and 250 mule deer; provide for upland game bird production and maintain existing nongame species.

Issue Severe winters. Periodically, severe winters result in unavailable forage for extended periods due to deep snow. The combination of snow and extreme cold can result in increased elk and deer mortality, low production and/or survival of young.

Strategy Improve riparian communities that provide emergency winter food sources such as shrubs, aspen bark and forbs, also provide thermal cover to minimize energy losses by removing livestock use. Apply habitat improvement strategies to provide high quality fall and spring forage to aid animals in reducing the effects of winter related stress. Adjust hunting season strategies to harvest more or fewer animals as appropriate. Monitor the effects of severe winters and heavy elk use on vegetation.

Issue Game damage.

Strategy On adjacent properties, game damage problems will be managed through public hunting wherever possible. Game damage materials will be provided on an as needed basis to landowners who allow public hunting.

Strategy The elk population will be managed within the framework of the Elk Management Plan. Current peak population ranges from 570 to 660 in the western portion of HD339. Based on 3-year averages, future elk management objectives will not exceed this range, with a target of 600.

Issue Upland game birds. The riparian shrub community supports a marginal population of ruffed grouse. Grouse and hunting of grouse depend on the presence of healthy aspen groves and thick shrub cover. There may be opportunities to improve habitat for blue and ruffed grouse and other species of upland game birds.

Strategy Rejuvenate riparian zones by preventing livestock use. Protecting riparian areas will serve other objectives mentioned above. Explore the possibility of improving bird habitat using the Upland Game Bird Habitat Enhancement Program.

Issue Nongame species. Little has been done to document the species of birds, mammals, amphibians and reptiles that inhabit the WMA. Species of special concern may occur.

Strategy As time and resources permit, conduct nongame surveys documenting species occurrence, distribution and seasonal use on the WMA. Bird lists and other information could be made available to the public at trailhead facilities.

Objective 3: Provide public hunting access.

Issue Access to the property and adjacent public lands.

Strategy Canyon Creek, regardless of whether it is managed as a WMA or a conservation easement under private ownership, would provide hunter access to the property itself, to adjacent public lands, and to adjacent conservation easement lands.

Issue Effects of public access. Increased public access, particularly with respect to vehicles, can result in habitat damage. Motorized use of the WMA was uncontrolled by the previous landowner. Numerous logging roads exist on the property and have been used by motorized users during the hunting season and at other times of year resulting in pioneering of roads, spread of noxious weeds, erosion, and reduced use of the area by wildlife.

Strategy Manage motorized travel to provide wildlife security and minimize losses of wildlife habitat. Prohibit all off road vehicle use. Implement seasonal closures and provide adequate signing and parking facilities to protect WMA soils and vegetation.

Strategy Retain wildlife use on the WMA and adjacent public property. Use of the WMA by people on foot or horseback, as compared to motorized users, will result in less

displacement of wildlife to adjacent private lands.

Strategy Methods to minimize hunter management workload would be devised for a potential new owner, should the property be exchanged/sold. Necessary assistance would be provided at the request of the landowner, to alleviate possible problems with managing hunter access (e.g. hunter permission slips, hunter sign-in roster, signing roads, enforcing rules, and establish parking areas).

Issue Low public awareness of management program. The public may be unaware of the MFWP management objectives and programs on the WMA.

Strategy Improve signing for the WMA near the entrance to the property. Provide a map of the area and information about the purpose and management of the WMA. Where appropriate, erect signs explaining specific management treatments that the public can view and evaluate for themselves. Conduct WMA tours and speak to groups as needed. Involve sportsmen, landowners, agencies and universities in the management of the WMA. Make the management plan available to individuals who express interest.

Issue Public unfamiliarity with regulations. The public may be unaware of WMA regulations and activities permitted on the area.

Strategy Post the regulations and dates when public use is permitted. Post the affected WMA boundaries with closure notices during seasons when certain activities are prohibited. Post notices of special hunting regulations.

Strategy Commercial use is not allowed.

Strategy Develop an informational brochure about the WMA.

Issue Confusion over boundaries. The public may be unaware of the WMA boundaries. The problem is greatest during the hunting season.

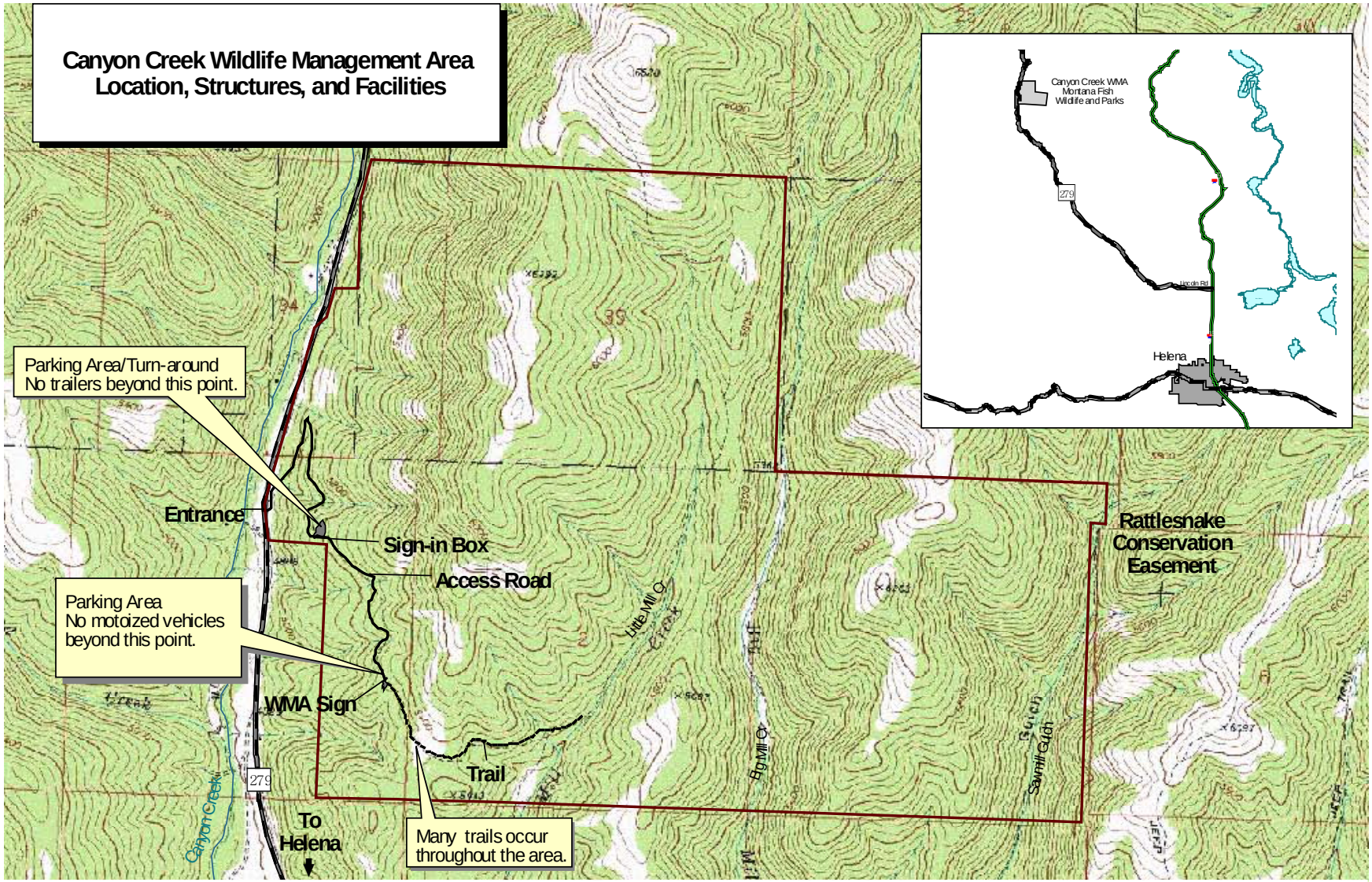
Strategy Post boundaries and maintain proper signing. Develop an informational brochure with an adequate map. Coordinate with the DNRC and Forest Service to incorporate the WMA on resource maps used by the public.

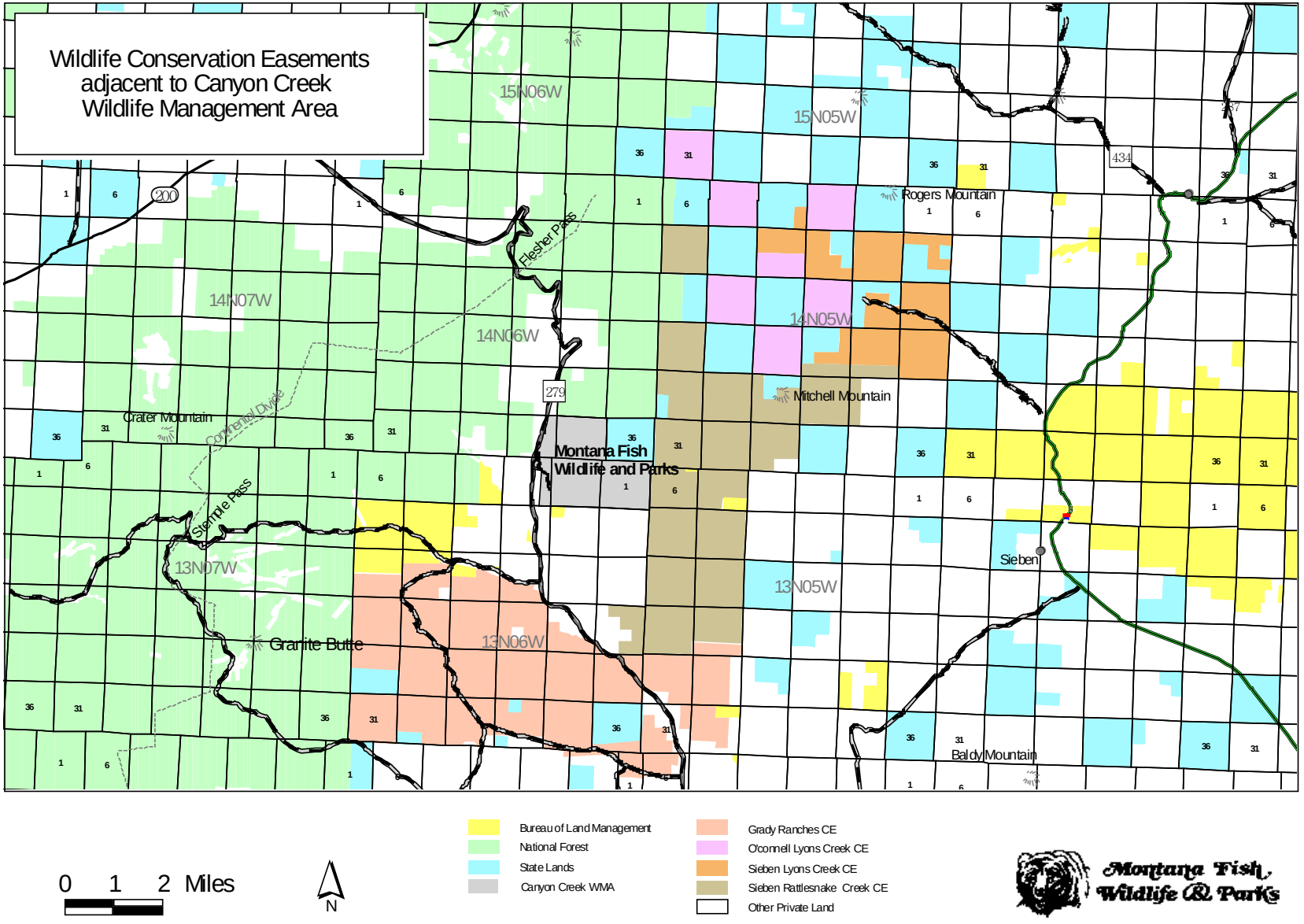
MONITORING

Annual work plan will be a yearly addendum to the management plan. The work plan uses strategies outlined in the management plan and develops projects that will accomplish stated objectives. The work plan is the action document that carries out the management plan. Work plans are the link between planning and accomplishing tasks on the ground.

The combination of Management and Work Plans allows the Department and the public to see what we have set out to accomplish, how it will be done and what we have or have not accomplished. The work plan projects are the items that will be monitored annually to see if they are solving stated problems and keeping us on track. Monitoring the work plan design and annual completion reports is a critical part of the Management Plan.

Wildlife monitoring will be conducted as has been done in the past, including annual elk surveys and mule deer post-season and spring green-up trend surveys.


Canyon Creek Wildlife Management Area
Location, Structures, and Facilities
Canyon Creek WMA
Montana Fish
Wildlife and Parks
279
Lincoln Rd
Helena
Parking Area/Turn-around
No trailers beyond this point.
Entrance
Sign-in Box
Access Road
Parking Area
No motoized vehicles
beyond this point.
WMA Sign
Trail
To
Helena
Many trails occur
throughout the area.
Rattlesnake
Conservation
Easement
Little Mill Cr
Sawmill Gulch
Canyon Creek
279
0
0.5
1 Miles
N
Canyon Creek WMA
279 Lincoln Highway
Montana Fish,
Wildlife & Parks


Wildlife Conservation Easements
adjacent to Canyon Creek
Wildlife Management Area
15N06W
15N05W
14N07W
14N06W
14N05W
13N07W
13N06W
13N05W
200
279
434
Fleshers Pass
Simple Pass
Continental Divide
Crater Mountain
Rogers Mountain
Mitchell Mountain
Granite Butte
Baldy Mountain
Sieben
Montana Fish
Wildlife and Parks
0 1 2 Miles
N
Bureau of Land Management
National Forest
State Lands
Canyon Creek WMA
Grady Ranches CE
O'connell Lyons Creek CE
Sieben Lyons Creek CE
Sieben Rattlesnake Creek CE
Other Private Land
Montana Fish, Wildlife & Parks

APPENDIX A: HISTORY

The Canyon Creek Wildlife Management Area (WMA) was purchased by FWP on September 4, 1996 from John and Nina Baucus of the Sieben Ranch Company for $663,000 (Figure 1). This purchase was part of a complex land transaction that involved not only purchase of the Canyon Creek property, but also purchase of conservation easements on the Sieben-Rattlesnake, the Sieben-Lyons Creek and the O'Connell-Lyons Creek properties (Figure 2).

The Canyon Creek area was first settled in the 1840s by Europeans. The remains of a small log structure is present near the Little Mill Road turnoff but its history is unknown. The south half of Section 2 was owned by Eddie Anders who ran a sawmill, ranched and raised chickens in the early 1900's. Section 35 was ranched by the Strom family during the same period. Most of the Mill Creek property was acquired by the Sieben Ranch prior to 1946 and the remaining small track was acquired in 1952.

The property has experienced moderate to heavy timber harvest that has resulted in a network of logging roads which, except for designated routes, have subsequently been closed to unauthorized motorized travel. The area had been grazed by sheep and cattle until 1996, and more recently by trespass cattle. The Canyon Creek-Mill Creek portion of the Sieben Ranch livestock grazing operation proved to be difficult to manage due to steep, rugged, and timbered terrain. The area was utilized seasonally during spring and fall by domestic sheep as they were trailed between the main ranch, and summer range lands in the headwaters of the Blackfoot River. The ranch was restructured in the late 1990's, involving a partial shift from sheep to cattle. Operation costs associated with inaccessibility of the parcel proved to be problematic for effective livestock grazing, so after a portion of the timber was logged in the 1970's and 90's, this 2,210 acre parcel was split off from the main body of ranch lands and offered for sale.

During the 1980's the private property owner adjoining the Canyon Creek property on the south partially restricted public hunting and planted barley, alfalfa and other grain crops in the mountain meadows. Crop damage by elk occurred almost immediately. A series of game damage assistance efforts ensued including special hunts and aversive tactics. The property ultimately changed ownership that resulted in closure to all hunting. The adjacent private land hunting closure created a sanctuary where elk numbers increased and took refuge during the hunting season, but emerged during other times of the year, resulting in crop damage for adjacent landowners.

The Sieben Ranch traditionally allowed public hunting on their property, the manner in which hunters distributed themselves along the southern property boundary however, resulted in a firing-line situation that elk were reluctant to cross. Upon purchase of the Canyon Creek property by FWP, a walk-in only hunting strategy was implemented that alleviated hunter congestion along the boundary fence line.

Canyon Creek WMA offers secure habitat during the hunting season and a secure corridor that wildlife use to move north and east from adjoining private property and onto national forest, state, and Sieben-Rattlesnake Conservation Easement lands. Therefore, in addition to providing important winter range, acquisition of the Canyon Creek property has also been important in

redistributing elk onto state, federal, and private lands where hunting is allowed and wildlife management objectives can be realized.

APPENDIX B: PHYSICAL DESCRIPTION

Legal Description

Township 13 North, Range 6 West, P.M.M.

Section	1: Lots 1,2,3 and 4; S½N½; SE¼ and SW¼ (All Fractional)
Section	2: Lots 1,2,3, and 4; S½NE¼; S½NW¼; S½ (All Fractional)
Section	3: Lot 1, that portion of Lot 2 East of Highway, SE¼NE¼, E½SE¼ (as disclosed by Deed recorded on book 172, Page 211)

Township 14 North, Range 6 West, P.M.M.

Section	34: those portions of Lot 3, NE¼NE¼, S½SW¼NE¼, and NW¼SE¼ East of Highway, Lot 4; SE¼NE¼; NE¼SE¼ (as disclosed by Deed recorded in Book 172, page 211)
Section	35: NE¼; NW¼; N½SE¼; N½SW¼ and Lots 1,2,3 and 4 (All Fractional)

Containing in all 2,210 acres, more or less.

Location and Topography

The Canyon Creek property is located approximately 26 air miles northwest of Helena, east of State Highway 279, and 3 miles southeast of Flesher Pass on the Continental Divide (Figure 1).

This 2,210 acre area (3.4 square miles) is composed of rolling ponderosa pine-Douglas fir-grasslands, and the riparian headwaters of three drainages: Little Mill Creek, Big Mill Creek, and Sawmill Gulch. All three drain into Canyon Creek, a tributary of Little Prickly Pear Creek and then the Missouri River.

The WMA adjoins the Helena National Forest on the north, Montana Department of Natural Resources and Conservation land and the Sieben Ranch (Rattlesnake Creek) Conservation Easement on the east, private property on the south, and state highway 279 on the west (Figure 2). There are 3 miles of boundary in common with public land.

The elevation ranges from 4,880 feet along Highway 279 near Canyon Creek to 6,292 feet at the head of Little Mill Creek. The headwaters of all three drainages extend to the north beyond the property; thus few northerly exposures occur on the WMA, resulting in east, west, and southerly exposures conducive to big game winter range.

Climate

The Canyon Creek WMA occurs 8 air miles south of, and at the same elevation as Rogers Pass, the nearest weather station. Rogers Pass has similar climatological conditions, at an elevation of 5610 feet. Thirty-seven years of detailed weather data is available from Rogers Pass.

Fifteen to 20 inches of precipitation is received annually, with approximately half of the annual precipitation falling as snow. Over the course of the winter, about 88 inches of snow falls, with an average of 13.5 inches falling per month from December through April. May and June are the wettest months, each averaging approximately 3.06 inches of precipitation. Average monthly maximum temperatures range from 32.6 (F) in January to 81.2 (F) in July, while average minimum temperatures range from 12.6 (F) in January to 49.6 (F) in July.

ROGERS PASS 9 NNE, MONTANA (247159)

Period of Record Monthly Climate Summary

Period of Record : 8/21/1964 to 12/31/2001

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	32.6	38.7	44.4	53.8	63.2	71.5	81.2	80.7	69.2	58.1	41.7	34.0	55.8
Average Min. Temperature (F)	12.6	18.3	22.4	29.6	37.6	44.5	49.6	48.3	39.1	32.8	22.5	15.2	31.0
Average Total Precipitation (in.)	0.89	0.65	1.23	1.70	3.06	3.07	1.42	1.72	1.68	1.16	0.72	0.97	18.28
Average Total SnowFall (in.)	13.2	11.5	15.2	12.8	4.5	0.0	0.0	0.0	3.0	4.1	8.9	14.7	87.8
Average Snow Depth (in.)	4	3	2	1	0	0	0	0	0	0	1	2	1

Percent of possible observations for period of record.
Max. Temp.: 90% Min. Temp.: 89.8% Precipitation: 90.4% Snowfall: 76.9% Snow Depth: 83%
Check Station Metadata or Metadata graphics for more detail about data completeness.

In contrast, the Canyon Creek weather station is located 9 air miles south of the WMA along State Highway 279, at an elevation of 4320 feet and only receives 10.82 inches of annual precipitation.

Average snow accumulation during winter months is limited, creating ideal wintering conditions on east, west and south slopes of the WMA.

Geology

The Canyon Creek WMA occurs at an elevation, and along a portion of the Continental Divide that has experienced a complicated geologic history. According to Perry (1986), in western Montana, Middle Cambrian strata lie directly on the quartzites and argellites of the Precambrian Belt Series. The general character of the Cambrian strata is that of sandstone at the base

(Flathead Formation), overlain first by shale (Wolsey Formation) and then by limestone (Meagher Formation). There are no Ordovician or Silurian sediments at this elevation and latitude. But limestones from the Devonian Period submerged nearly all of Montana, laying down about 1,000 feet of strata, first as limestone and dolomite (Jefferson Formation), then products of evaporation in marine seas occurred, and finally shales were deposited. Deposition of dark shale (Three Forks Formation) occurred near the end of this period. During the Mississippian Period, thousands of feet of Madison limestones were laid down, then additional limestones of the lower Amsden Formation were deposited upon them. The white sand of the Quadrant Formation during the Pennsylvanian period extend just north of Helena and may not occur on the WMA. Neither are there any apparent deposits from the Permian, the final period of the Paleozoic Era.

The Triassic Period of the Mesozoic Era was a period of erosion, followed by the Jurassic which was characterized by an inland sea that created the Ellis formation. However, there are eight formations that are missing during this period in this portion of the state, and are thus important to the oil and gas industry because the Ellis formation merges directly into the Madison formation which often bears oil and gas. The Cretaceous Period produced a series of large volcanoes on the edge of the inland sea, very near to the Canyon Creek WMA (Wolf Creek area). These were the first volcanoes in Montana since early Precambrian times. This period brought an end to encroachment of marine waters.

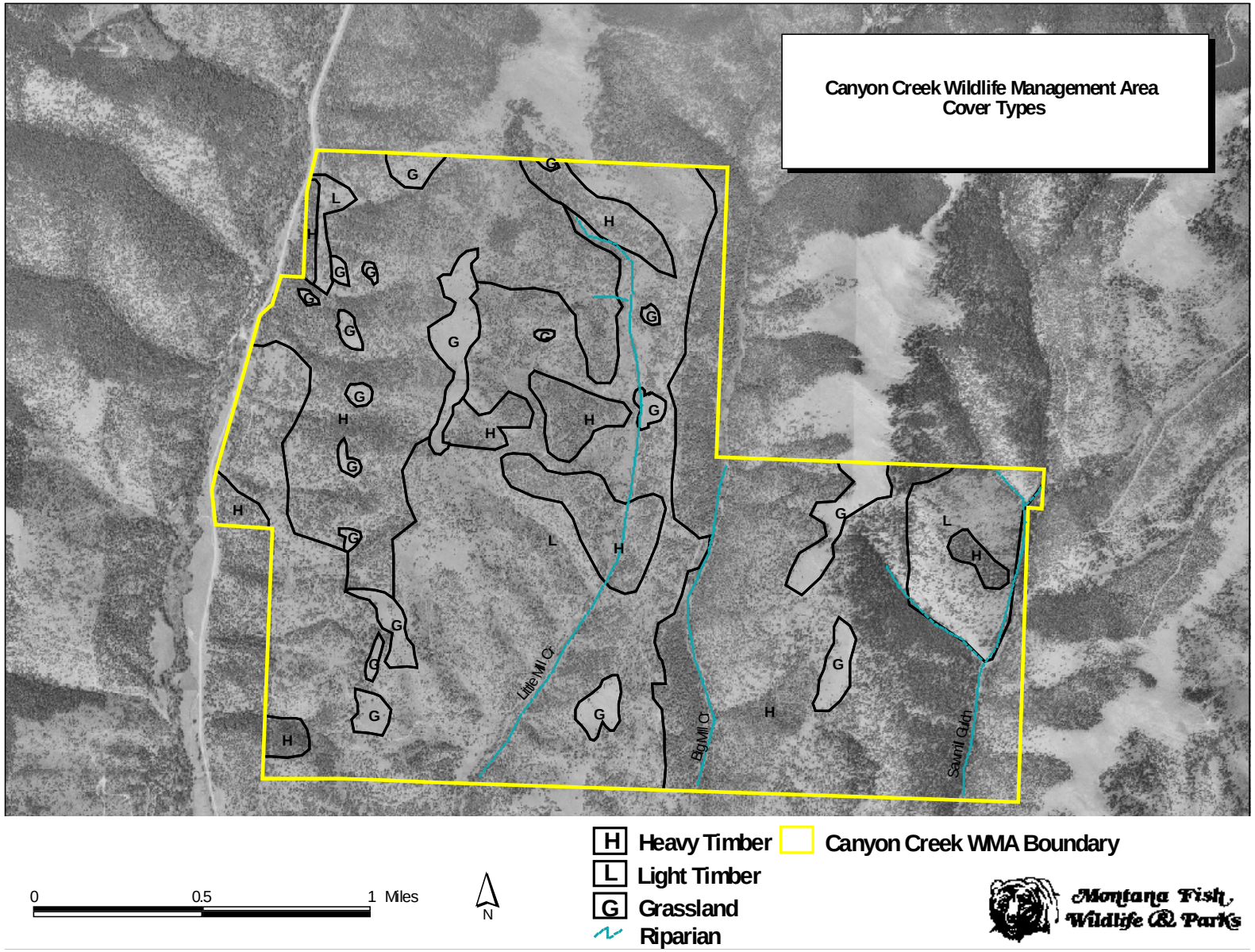
The Cenozoic Era began with uplifting of the first Rocky Mountains during the early Tertiary Period, and then a second uplifting that resulted in the second Rocky Mountains being formed. The Quanternary Period brought glacial ice up to two miles deep, that extended south to the Missouri River and ultimately changed the course of that river. However, this ice sheet probably did not cover the WMA. Because the WMA was part of a high elevation ridge that became the Continental Divide, it was ice free and likely provided wildlife habitat throughout the Ice Age.

Vegetation Description

Cover Types

In a broad context, three vegetation cover types are delineated in Figure 3, including grassland, conifer forest (heavy and light timber), and riparian types.

Grassland. Figure 3 identifies locations of moderately large grassland areas. Small grassland openings also occur throughout the conifer forest due to natural occurrences or past logging. These grasslands are dominated by grass species but some sites have patches of mountain big sagebrush *(Artemesia tridentate)*. The most common grassland habitat type on the WMA is the rough fescue/Idaho fescue type (*Festuca scabrella/Festuca idahoensis*). The other most common grassland habitat type is the Idaho fescue/bluebunch wheatgrass type (*Festuca idahoensis /Agropyron spicatum*). Small areas of mountain sagebrush/rough fescue type are also present.


Canyon Creek Wildlife Management Area
Cover Types
Little Mil Cr.
Big Mil Cr.
Sawmill Gulch
H Heavy Timber
L Light Timber
G Grassland
Riparian
Canyon Creek WMA Boundary
0
0.5
1 Miles
N
Montana Fish, Wildlife & Parks

Conifer Forest. The most common forest habitat type is Douglas-fir/rough fescue (*Pseudotsuga menziesii/Festuca scabrella*). This habitat type occupies the majority of the WMA. Small areas of Douglas-fir/Idaho fescue (*Pseudotsuga menzesia/Festuca idahoensis*), Douglas-fir/elk sedge (*Pseudotsuga menziesii/Carex spp.)* and Douglas-fir/pinegrass (*Pseudotsuga menziesii/Calamagrostis rubescens*) also occur within the WMA.

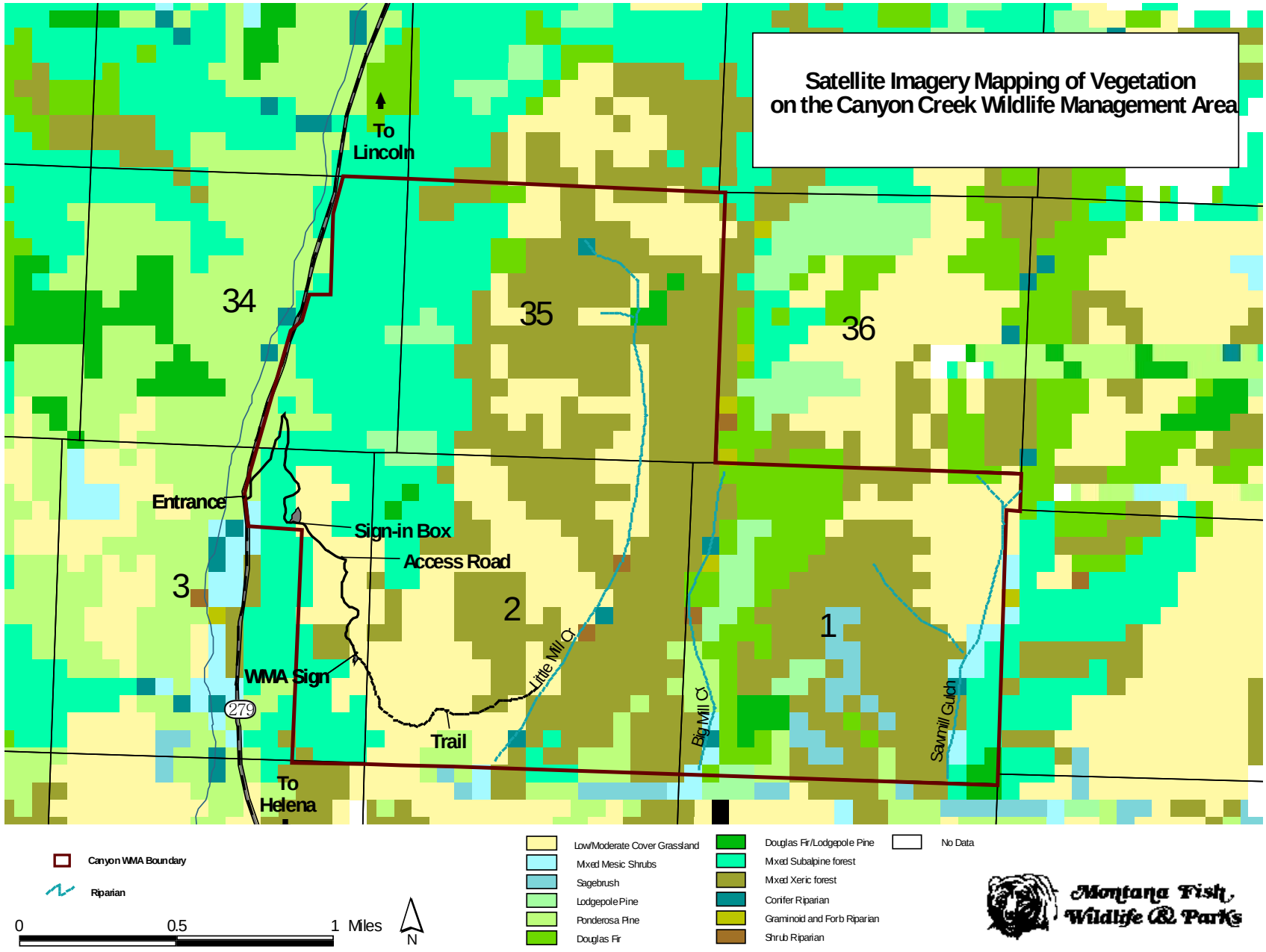
Riparian. Riparian vegetation communities occur along the three creek drainages (Figure 3). Riparian is defined as sites that have permanent water tables at or near the surface for a significant period in the growing season. The dominant riparian habitat type is the Douglas-fir/red-osier dogwood (*Pseudotsuga menziesii* /*Cornus canadensis*) type. This type is dominated by scattered Douglas fir, black cottonwood (*Populus trichocarpa)* and aspen (*P. tremuloides*) with an understory that includes: red-osier dogwood, bebbs willow (*Salix bebbiana*), sandbar willow (*S. interior*), Douglas hawthorn (*Crataegus douglasii*), woodrose (*Rosa woodsii*), snowberry (*Symphoricarpos albus*), water birch (*Betula occidentalis*) and alder (*Alnus spp.*). A few sites may be classified marginally as the Englemann spruce/red-osier dogwood (*Picea engelmanni*) habitat type. A few small sites lack conifer trees and could be classified as willow types. Most riparian areas in these units show signs of past livestock use that has resulted in reduced coverage of riparian species, browse lines on shrubs, and invasion by non-native plants especially Canada thistle (*Cirsium arvense*), Kentucky bluegrass (*Poa pratensis*), common tansy (*Tanacetum vulgare*), houndstongue (*Cynoglossum officinale*), and diffuse and spotted knapweed (*Centaurea diffusa, C. maculosa*).

Existing Vegetation and Ground Cover based on GAP: Landsat Thematic Mapper Imagery

Upland cover types mapped to a 90 m^2 (0.8 ha) minimum map unit, were taken from the Montana GAP Analysis project (Redmond et al. 1998) (Figure 4). The term "GAP" refers to the gaps in national, regional, and state information relative to vegetation and vertebrate distribution. The Montana GAP project has compiled and analyzed vegetation and vertebrate data at the state wide level to identify areas within the state where biodiversity may be at risk as a result of human influence.

Redmond et al. (1998) provides caveats regarding the type of use and scale to which GAP information can be reliably applied. Although the Canyon Creek WMA occurs at a much smaller scale than is recommended for analysis of information (100,000 acres), descriptions of existing vegetation and land cover at a gross level is appropriate. The minimal map unit used in the GAP project is a pixel size of 90 m^2, therefore potentially important habitat microsites such as seeps, springs, and narrow riparian zones are not represented. Although these types are extremely important landscape components for wildlife, the more expansive upland categories of ground cover are described in the standard format as presented in Fisher et al. (1998).

Low/Moderate Cover Grassland. Low to moderate cover grasslands with total grass cover from 20-70%. Dominated by short to medium height grasses and forbs. Twelve dominant species are listed (Appendix C) including arrowleaf balsamroot *(Balsamorhiza sagittata),* bluebunch wheatgrass *(Agropyron spicatum),* blue grama *(Bouteloa gracilis),* bluestem *(Andropogon spp.),* among others. Includes rangelands and non-irrigated pastures.


Satellite Imagery Mapping of Vegetation
on the Canyon Creek Wildlife Management Area
To
Lincoln
34
35
36
Entrance
Sign-in Box
Access Road
3
2
1
WMA Sign
279
Trail
To
Helena
Little Mill Cr.
Big Mill Cr.
Sawmill Gulch
Canyon WMA Boundary
Riparian
0
0.5
1 Miles
N
Low/Moderate Cover Grassland
Mixed Mesic Shrubs
Sagebrush
Lodgepole Pine
Ponderosa Pine
Douglas Fir
Douglas Fir/Lodgepole Pine
Mixed Subalpine forest
Mixed Xeric forest
Conifer Riparian
Graminoid and Forb Riparian
Shrub Riparian
No Data
Montana Fish, Wildlife & Parks

Mixed Mesic Shrubs. Shrublands where mesic shrubs are dominant, with shrub cover from 20-100%. Usually associated with moist sites. Dominant species in part include: alder *(Alnus spp.)*, buffalo berry *(Shepherdia argentia)*, ceanothus *(Ceanothus spp.)*, snowberry *(Symphoricarpos spp.)*, Western serviceberry *(Amelanchier alnifolia)*, whortleberry *(Vaccinium scoparium)*.

Sagebrush. Shrublands dominated by sagebrush *(Artemisia spp.)* with 20-80% cover. Associated grass and forb species: bluebunch wheatgrass, blue gamma *(Andropogon gracilis)*, Idaho fescue *(Festuca idahoensis)*, western wheatgrass *(Agropyron smithii)*.

Lodgepole Pine. Conifer forest dominated by lodgepole pine *(Pinus contorta)* with 20-100% cover. Associated shrub species: huckleberry, *(Vaccinium spp.)*, Oregon grape *(Berberis repens)*, shiny-leaf spirea *(Spirea betulifolia)*, whortleberry. Associated grass and forb species: arnica *(Arnica spp.)*, beargrass *(Xerophyllum tenax)*, pinegrass *(Calamagrostis rubescens)*.

Ponderosa Pine. Conifer forest dominated by ponderosa pine *(Pinus ponderosa)* with 20-80% cover. Associated shrub species: big sagebrush *(Artemisia tridentata)*, ninebark *(Physocarpus malvaceus)*, snowberry. Associated grass and forb species: bluebunch wheatgrass, blue grama, Idaho fescue.

Douglas-fir. Conifer forest dominated by Douglas-fir *(Pseudotsuga menziesii)* with 20-90% cover. Associated shrub species: ninebark, shiny-leaf spiraea, snowberry. Associated grass and forb species: bluebunch wheatgrass, Idaho fescue, pinegrass.

Douglas-fir/Lodgepole Pine. Conifer forest with codominance of Douglas-fir and lodgepole pine with cover from 40-90%. Associated shrub species: huckleberry, Oregon grape, shiny-leaf spirea, whortleberry. Associated grass species: pinegrass.

Mixed Subalpine Forest. Mixed conifer forest with greater than 10% subalpine fir *(Abies lasiocarpa)* cover with total tree cover from 20-80%. Associated shrub species: huckleberry, mensiesia *(Menziesia ferruginea)*, whortleberry. Associated grass and forb species: arnica, beargrass, elk sedge *(Carex geyeri)*.

Mixed Xeric Forest. Mixed xeric conifer forests with total tree cover from 20-100%. Predominately Douglas-fir and ponderosa pine stands. Associated shrub species: ninebark, shiny-leaf spirea, snowberry.

Conifer Riparian. Riparian areas dominated by conifer forest, with total tree cover from 20-100%. Associated shrub species: alder, bunchberry *(Cornus canadensis)*, serviceberry, thimbleberry *(Rubus parviflorum)*, twin flower *(Linaea borealis)*. Associated grass and forb species: queens cup beadlily *(Clintonia uniflora)*.

These ten vegetation types, as presented in the Montana Land Cover Atlas (Fisher et al.1998, in the Montana GAP Project), occur on the Canyon Creek WMA. Although Figure 4 indicates that *Graminoid and Forb Riparian* and *Shrub Riparian* cover types are present on the WMA, classical conditions for these types do not seem to be present. Dominant species, state range, elevation information, and visual examples are presented for each type present on the WMA.

Montana Land Cover Atlas is inserted in next 10 pages in printed version of plan.

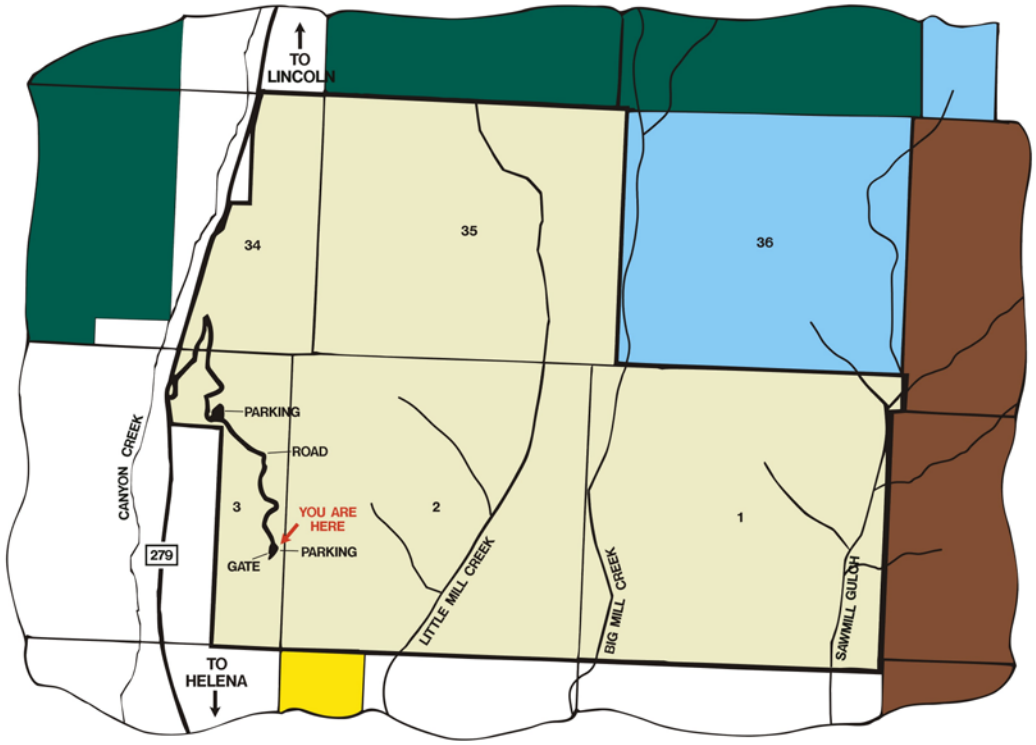
CANYON CREEK WILDLIFE MANAGEMENT AREA

- BUREAU OF LAND MANAGEMENT
- NATIONAL FOREST
- STATE LANDS
- SIEBEN CONSERVATION EASEMENT
- CANYON CREEK WILDLIFE MANAGEMENT AREA
- PRIVATE

N

- WINTER WILDLIFE CLOSURE: WMA closed to all unauthorized activities from December 1 to May 14.
- Motor and wheeled VEHICLES must stay on authorized roads only.
- WMA open to DAY-USE only.
- WEED SEED FREE FEED products are required.
- COMMERCIAL use of the WMA is prohibited.

Montana Fish, Wildlife & Parks



Water Rights
There are no water rights associated with the property. Three tributaries that flow through the WMA originate on national forest land upstream from the property. Historic water use has been mainly for livestock watering. Limited domestic use occurred by early residents. No evidence of wells, spring developments, irrigation diversions or water rights filings was found related to this property (Dutton 1998).

Mineral Rights
No mineral resources have been identified on the WMA, and no mining activity is present although a small pit at the entrance to the property appears to have been used for gravel or rock. In an Environmental Assessment report prepared by Hydrometrics (1996) for MFWP to evaluate the pending purchase of this property, the statement is made, "it appears that either Sieben Ranch Co. or the U.S. government own all the minerals." A separate mineral title report by MFWP has not been completed on the property.

Signs and Boundary Markers
Minimal signing occurs on the Canyon Creek WMA. The entrance from Highway 279 is marked only by a road sign that indicates, "Little Mill Creek Road". Approximately 1 mile up the road, a small sign at the lower parking area advises visitors to park trailers there because there is not a turn-around at the upper parking area. A large sign (Figure 5) at the upper parking area provides and map with land ownership and regulations for the area.

Current deer and elk regulation signs are posted at the entrance to the WMA.

The Canyon Creek WMA has 8 miles of boundary in common with other landowners. Only the southern 2¼ miles of boundary is currently fenced (as of 2002), although old fencing exists along portions of the eastern boundary and some old internal fencing remains.

Public Use Facilities
An access road and two parking areas constitute the public use facilities on the property. The WMA is being managed as an undeveloped day-use site for hunting opportunity and dispersed outdoor recreation. Many miles of old logging routes occur on the property that provide hiking trails. Motorized use beyond the upper parking lot is not allowed.

APPENDIX C: WILDLIFE DATA

The Canyon Creek WMA provides yearlong elk and mule deer habitat and winter range that is contiguous with the Rattlesnake Conservation Easement property. Up to 200 elk utilize the WMA seasonally, while others travel across the WMA as they move between summer ranges west of the Continental Divide and winter ranges to the east.

Post hunting season population surveys for elk are conducted annually between December and April across the entire hunting district (339). Distribution and classification of individual animals is noted. These surveys are on record in the Helena Area Resource Office as well as the Region 3 Office in Bozeman.

ELK POPULATION SURVEYS OF HUNTING DISTRICT 339, 1989-2002

YEAR	AntlsPerm	TOTAL	#BULS	COW	CALF	%M	B:COW	CF:COW
2002	300	640	62	424	154	9.7	14.6	36.3
2001	400	661	84	424	153	12.7	19.8	36
2000	400	821	57	616	148	6.9	9.3	23.9
1999	400	776	62	571	143	7.9	10.9	25
1998	400	720	29	590	101	4	4.9	36
1997	400	902	60			6.6	10.4	36
1996	400	739	60	558	121	8.1	10.7	21.7
1995	300	610	31	469	110	5	7	23.5
1993	300	835	22			2.6	3.9	40.5
1992	300	774	26			3.4	4.6	33
1991	150	700	25	490	185	3.6	5.1	37.8
1989	100	660	19	334	182	2.9	4.8	54.5

The Canyon Creek WMA comprises a portion of the Northwest Region 3 Mule Deer Survey. This survey covers a portion of hunting districts 339 and 343. One segment of the survey is conducted annually in December to obtain classification information, particularly presence and relative age of bucks, while the second segment of the survey is conducted in April to determine fawn recruitment. The purpose of this survey is to provide long-term trend information about mule deer population fluctuations, and serve as the basis for establishing mule deer hunting seasons. These surveys are also on file in the HARO and Bozeman offices.

Early Winter Mule Deer Survey - NORTHWEST REGION 3 (HD339)

YEAR	# OBS	Fn:100Fe	Fn:100Ad	Male:100F	%Ant.Male	%2.5yr+M
1996-97	305	72.6	71.3	1.7	1.0	0
1997-98	92	15.4	15.0	2.6	2.2	0
1998-99	163	86.2	86.2	0	0	0
1999-	201	62.4	57.0	9.4	5.5	1.5
2000-01	253	60.8	52.4	16.1	9.1	0
2001-02	312	32.4	28.4	14.1	9.6	1.6

Spring Green Grass Survey of Mule Deer – (HD339)

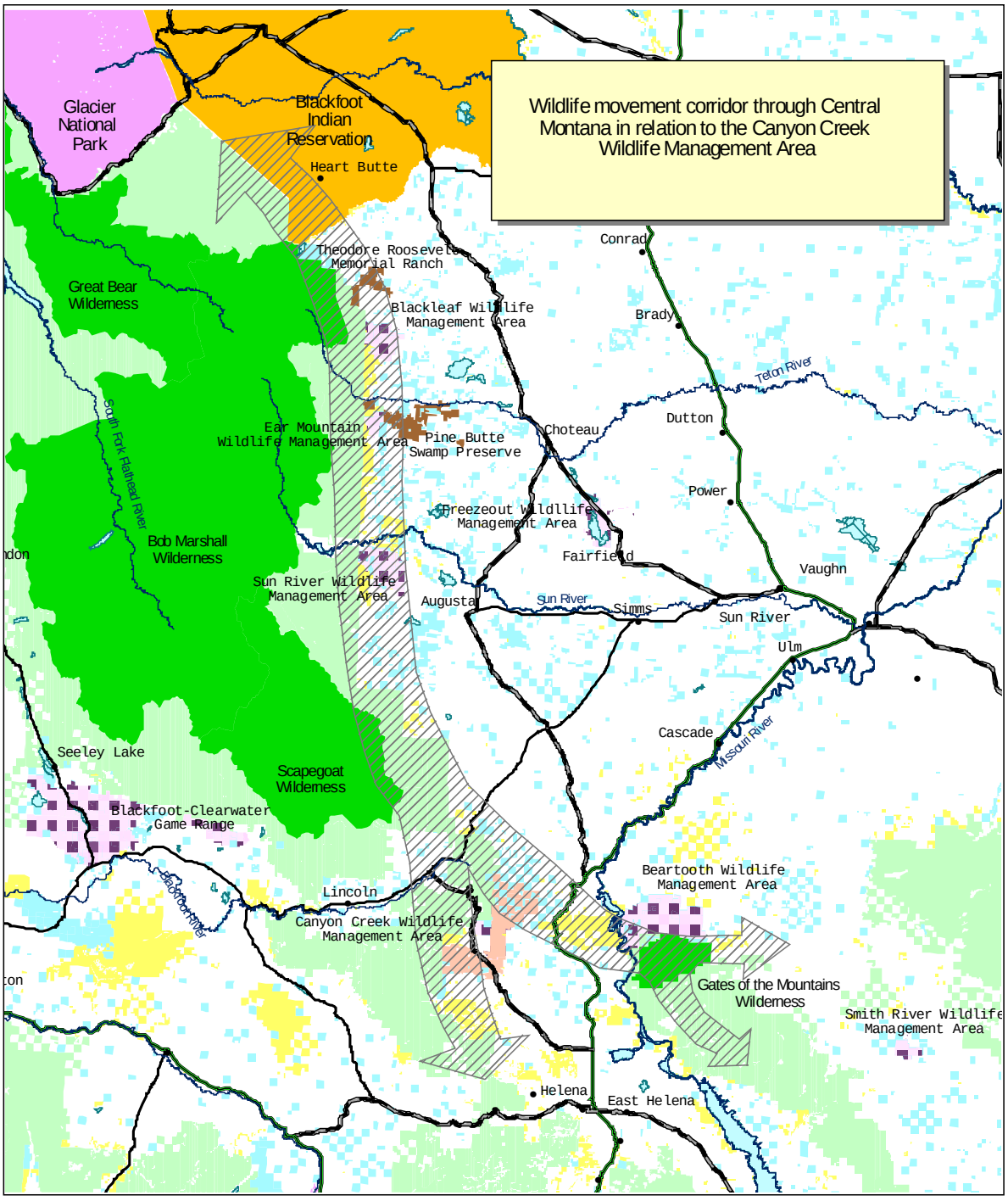
YEAR	# OBS	Fn:100Ad
1999	520	55.2
2000	380	55.7
2001	455	48.7
2002	**593**	**46.4**

Mountain lions, black bear, blue grouse, occasional white-tailed deer and a variety of non-game species are also present on the WMA, but structured survey data for these species are not gathered. Grizzly bear occur in the immediate vicinity, and one female had denned in the general area and is known to have raised at least two sets of cubs through the late 1990's and into the early decade of 2000. Gray wolves likely spend some time on and travel through the WMA. The

general area of the wildlife movement corridor as noted in Figure 6 is confirmed to be used by grizzly bear, raptors, elk, mule deer, mountain goats, and bighorn sheep, and is likely used by black bear, wolves, and other forest carnivores as well. This movement corridor is actually the geographic transitional zone between the high plains and the east slope of the Rocky Mountains. It provides relatively gentle, yet adequately secure terrain suitable for moving in a north-south direction through Montana. South of Rogers Pass, the prairie-mountain zone becomes more complicated as island mountain ranges seem to encroach upon the continental divide. The movement corridor splits with one arm continuing south along the continental divide and the other arm veering eastward to cross the Missouri River[1] and several island mountain ranges to the east. It is here, just south of Rogers Pass, as the eastern arm of the corridor begins to swing toward the Missouri River, that the Canyon Creek WMA occurs.

A list of wildlife species known to be present or presumed to be present based on existing habitat, local knowledge, and database searches of species occurrence catalogued by the Montana Natural Heritage Program for Quarter Lati-Long (LL) 27 are provided here.

[1] Wildlife cross the Missouri River between the Sleeping Giant BLM Wilderness and Ming Bar on the Beartooth Wildlife Management Area (*Prehistory to Posterity*, Montana Outdoors, March/April 1997)


Wildlife movement corridor through Central Montana in relation to the Canyon Creek Wildlife Management Area
Glacier National Park
Blackfoot Indian Reservation
Heart Butte
Theodore Roosevelt Memorial Ranch
Great Bear Wilderness
Blackleaf Wildlife Management Area
Conrad
Brady
Teton River
Dutton
Choteau
Ear Mountain Wildlife Management Area
Pine Butte Swamp Preserve
South Fork Flathead River
Power
Freezeout Wildlife Management Area
Bob Marshall Wilderness
Fairfield
Vaughn
Sun River Wildlife Management Area
Augusta
Sun River
Simms
Sun River
Ulm
Cascade
Missouri River
Seeley Lake
Scapegoat Wilderness
Blackfoot-Clearwater Game Range
Beartooth Wildlife Management Area
Lincoln
Canyon Creek Wildlife Management Area
Gates of the Mountains Wilderness
Smith River Wildlife Management Area
Helena
East Helena
Wilderness
Private Conservation Parcels
FWP Wildlife Management Areas
Grady/O'Connell/Sieben Easements
Bureau of Land Management
National Forest
State Lands
National Parks
Indian Reservations
N
0 10 20 Miles
Montana Fish, Wildlife & Parks

Vertebrate Species List for the Canyon Creek WMA – partial listing.

Amphibians

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Ambystoma macrodactylum	Long-toed salamander	N
Rana luteiventris	Columbia spotted frog	Y

Reptiles

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Charina bottae	Rubber boa	N
Coluber constrictor	Racer	N
Pituophis catenifer	Gopher snake or bullsnake	N
Thamnophis elegans	Western terrestrial garter snake	N

Birds

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Cathartes aura	Turkey vulture	N
Haliaeetus leucocephalus	Bald eagle	Y
Accipiter striatus	Sharp-shinned hawk	N
Accipiter cooperii	Cooper's hawk	N
Accipiter gentilis	Northern goshawk	Y
Buteo swainsoni	Swainson's gawk	Y
Buteo jamaicensis	Red-tailed hawk	N
Buteo regalis	Ferruginous hawk	Y
Buteo lagopus	Rough-legged hawk	N
Aquila chrysaetos	Golden eagle	N
Falco sparverius	American kestrel	N
Falco columbarius	Merlin	N
Falco peregrinus	Peregrine falcon	Y
Falco mexicanus	Prairie falcon	N
Perdix perdix	Gray partridge	N
Falcipennis canadensis	Spruce grouse	N
Dendragapus obscurus	Blue grouse	N
Bonasa umbellus	Ruffed grouse	N
Columba livia	Rock dove	N
Zenaida macroura	Mourning dove	N
Otus asio	Eastern screech-owl	W
Otus kennicottii	Western screech-owl	W
Bubo virginianus	Great horned owl	N
Nyctea scandiaca	Snowy owl	N
Strix varia	Barred owl	N
Strix nebulosa	Great gray owl	Y
Asio otus	Long-eared owl	N
Asio flammeus	Short-eared owl	N
Aegolius funereus	Boreal owl	Y
Aegolius acadicus	Northern saw-whet owl	N
Chordeiles minor	Common nighthawk	N
Stellula calliope	Calliope hummingbird	N
Selasphorus rufus	Rufous hummingbird	N
Sphyrapicus varius	Yellow-bellied sapsucker	N
Sphyrapicus thyroideus	Williamson's sapsucker	N
Sphyrapicus nuchalis	Red-naped sapsucker	N
Picoides pubescens	Downy woodpecker	N
Picoides villosus	Hairy woodpecker	Y
Picoides tridactylus	Three-toed woodpecker	
Colaptes auratus	Northern flicker	N
Dryocopus pileatus	Pileated woodpecker	Y
Contopus cooperi	Olive-sided flycatcher	N
Contopus sordidulus	Western wood-pewee	N
Tachycineta bicolor	Tree swallow	N
Tachycineta thalassina	Violet-green swallow	N
Stelgidopteryx serripennis	Northern rough-winged swallow	N
Riparia riparia	Bank swallow	N
Petrochelidon pyrrhonota	Cliff swallow	N
Hirundo rustica	Barn swallow	N
Perisoreus canadensis	Gray jay	N
Cyanocitta stelleri	Steller's jay	N
Nucifraga columbiana	Clark's nutcracker	N
Corvus brachyrhynchos	American crow	N
Corvus corax	Common raven	N
Poecile atricapillus	Black-capped chickadee	N
Poecile gambeli	Mountain chickadee	N
Poecile hudsonicus	Boreal chickadee	N
Poecile rufescens	Chestnut-backed chickadee	N
Sitta canadensis	Red-breasted nuthatch	N
Sitta carolinensis	White-breasted nuthatch	N
Sitta pygmaea	Pygmy nuthatch	N
Certhia americana	Brown creeper	N
Salpinctes obsoletus	Rock wren	N
Troglodytes aedon	House wren	N
Troglodytes troglodytes	Winter wren	N
Cistothorus palustris	Marsh wren	N
Cinclus mexicanus	American dipper	N
Regulus satrapa	Golden-crowned kinglet	N
Regulus calendula	Ruby-crowned kinglet	N
Sialia mexicana	Western bluebird	N
Sialia currucoides	Mountain bluebird	N
Myadestes townsendi	Townsend's solitaire	N
Catharus fuscescens	Veery	N
Catharus ustulatus	Swainson's thrush	N
Catharus guttatus	Hermit thrush	N
Hylocichla mustelina	Wood thrush	N
Turdus migratorius	American robin	N
Ixoreus naevius	Varied thrush	N
Bombycilla garrulus	Bohemian waxwing	N

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Bombycilla cedrorum	Cedar waxwing	N
Lanius excubitor	Northern shrike	N
Vireo gilvus	Warbling vireo	N
Dendroica petechia	Yellow warbler	N
Dendroica coronata	Yellow-rumped warbler	N
Dendroica townsendi	Townsend's warbler	N
Oporornis tolmiei	MacGillivray's warbler	N
Geothlypis trichas	Common yellowthroat	N
Wilsonia pusilla	Wilson's warbler	N
Piranga ludoviciana	Western tanager	N
Spizella arborea	American tree sparrow	N
Spizella passerina	Chipping sparrow	N
Calamospiza melanocorys	Lark bunting	N
Melospiza melodia	Song sparrow	N
Zonotrichia leucophrys	White-crowned sparrow	N
Junco hyemalis	Dark-eyed junco	N
Agelaius phoeniceus	Red-winged blackbird	N
Xanthocephalus xanthocephalus	Yellow-headed blackbird	N
Euphagus cyanocephalus	Brewer's blackbird	N
Molothrus ater	Brown-headed cowbird	N
Leucosticte tephrocotis	Gray-crowned rosy-finch	N
Pinicola enucleator	Pine grosbeak	N
Carpodacus cassinii	Cassin's finch	N
Loxia curvirostra	Red crossbill	N
Loxia leucoptera	White-winged crossbill	N
Carduelis flammea	Common redpoll	N
Carduelis hornemanni	Hoary redpoll	N
Carduelis pinus	Pine siskin	N
Carduelis tristis	American goldfinch	N
Coccothraustes vespertinus	Evening grosbeak	N

Mammals

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Sorex cinereus	Masked shrew	N
Sorex preblei	Preble's shrew	Y
Sorex vagrans	Vagrant shrew	N
Sorex monticolus	Dusky or Montane shrew	N
Sorex nanus	Dwarf shrew	Y
Sorex palustris	Water shrew	N
Sorex merriami	Merriam's shrew	Y
Sorex hoyi	Pygmy shrew	N
Sorex haydeni	Hayden's shrew	N
Myotis lucifugus	Little brown myotis	N
Myotis yumanensis	Yuma myotis	W
Myotis evotis	Long-eared myotis	N
Myotis thysanodes	Fringed myotis	Y
Myotis volans	Long-legged myotis	N
Myotis ciliolabrum	Western small-footed myotis	N
Myotis septentrionalis	Northern myotis	Y
Lasionycteris noctivagans	Silver-haired bat	N
Eptesicus fuscus	Big brown bat	N
Lasiurus borealis	Eastern red bat	N
Lasiurus cinereus	Hoary bat	N
Euderma maculatum	Spotted bat	Y
Corynorhinus townsendii	Townsend's big-eared bat	Y
Antrozous pallidus	Pallid bat	Y
Ochotona princeps	American pika	N
Sylvilagus floridanus	Eastern cottontail	W
Sylvilagus nuttallii	Mountain cottontail	N
Sylvilagus audubonii	Desert cottontail	N
Lepus americanus	Snowshoe hare	N
Lepus townsendii	White-tailed jack rabbit	N
Lepus californicus	Black-tailed jack rabbit	Y
Brachylagus idahoensis	Pygmy rabbit	Y
Tamias minimus	Least chipmunk	N
Tamias amoenus	Yellow-pine chipmunk	N
Tamias ruficaudus	Red-tailed chipmunk	N
Tamias umbrinus	Uinta chipmunk	Y
Marmota monax	Woodchuck	
Marmota flaviventris	Yellow-bellied marmot	N
Marmota caligata	Hoary marmot	N
Spermophilus townsendii	Townsend's ground squirrel	N
Spermophilus richardsonii	Richardson's ground squirrel	N
Spermophilus armatus	Uinta ground squirrel	N
Spermophilus columbianus	Columbian ground squirrel	N
Spermophilus tridecemlineatus	Thirteen-lined ground squirrel	N
Spermophilus franklinii	Franklin's ground squirrel	N
Spermophilus lateralis	Golden-mantled ground squirrel	N
Spermophilus elegans	Wyoming ground squirrel	N
Cynomys ludovicianus	Black-tailed prairie dog	Y
Cynomys leucurus	White-tailed prairie dog	Y
Sciurus carolinensis	Eastern gray squirrel	N
Sciurus niger	Eastern fox squirrel	N
Tamiasciurus hudsonicus	Red squirrel	N

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Glaucomys sabrinus	Northern flying squirrel	N
Thomomys talpoides	Northern pocket gopher	N
Thomomys idahoensis	Idaho pocket gopher	N
Perognathus fasciatus	Olive-backed pocket mouse	N
Perognathus flavescens	Plains pocket mouse	N
Perognathus parvus	Great Basin pocket mouse	Y
Dipodomys ordii	Ord's kangaroo rat	N
Chaetodipus hispidus	Hispid pocket mouse	Y
Castor canadensis	American beaver	N
Peromyscus maniculatus	Deer mouse	N
Peromyscus leucopus	White-footed mouse	N
Onychomys leucogaster	Northern grasshopper mouse	N
Neotoma cinerea	Bushy-tailed woodrat	N
Clethrionomys gapperi	Southern red-backed vole	N
Phenacomys intermedius	Heather vole	N
Microtus pennsylvanicus	Meadow vole	N
Microtus montanus	Montane vole	N
Microtus longicaudus	Long-tailed vole	N
Microtus ochrogaster	Prairie vole	N
Microtus richardsoni	Water vole	N
Lagurus curtatus	Sagebrush vole	N
Ondatra zibethicus	Muskrat	N
Synaptomys borealis	Northern bog lemming	Y
Rattus norvegicus	Norway rat	N
Mus musculus	House mouse	N
Zapus hudsonius	Meadow jumping mouse	Y
Zapus princeps	Western jumping mouse	N
Erethizon dorsatum	Common porcupine	N
Myocastor coypus	Nutria	N
Canis latrans	Coyote	N
Canis lupus	Gray wolf	Y
Vulpes vulpes	Red fox	N
Vulpes velox	Swift fox	Y
Urocyon cinereoargenteus	Common gray fox	N
Ursus americanus	Black bear	N
Ursus arctos horribilis	Grizzly bear	Y
Procyon lotor	Common raccoon	N
Martes americana	American marten	N
Martes pennanti	Fisher	Y
Mustela erminea	Ermine	N
Mustela nivalis	Least weasel	N
Mustela frenata	Long-tailed weasel	N
Gulo gulo luscus	North American wolverine	Y

Scientific Name	Common Name	SC
SC: Y = species of special concern; N = no special status; W = watch		
Taxidea taxus	American badger	N
Spilogale putorius	Eastern spotted skunk	W
Spilogale gracilis	Western spotted skunk	W
Mephitis mephitis	Striped skunk	N
Lutra canadensis	Northern river otter	N
Felis/Puma concolor	Mountain lion	N
Lynx canadensis pop 1	Lynx (US Lower 48)	Y
Felis rufus	Bobcat	N
Cervus elaphus	Wapiti or Elk	N
Odocoileus hemionus	Mule deer	N
Odocoileus virginianus	White-tailed deer	N
Alces alces	Moose	N

APPENDIX D: TRAVEL PLAN
CANYON CREEK
WILDLIFE MANAGEMENT AREA
TRAVEL PLAN

Goal: ***Manage for the welfare of Montana's wildlife and provide hunting opportunities that are compatible with wildlife habitat.***

The Canyon Creek property was acquired by Montana Fish, Wildlife & Parks in 1996, to protect wildlife habitat and provide hunter opportunity. The property includes portions of Canyon Creek, Little Mill Creek, Big Mill Creek and Sawmill Gulch (Figure 5). The Canyon Canyon Creek property adjoins Helena National Forest and Montana Department of Natural Resources and Conservation lands to the north, and the Sieben Ranch-Rattlesnake Conservation Easement to the east.

The Canyon Creek Wildlife Management Area (WMA) provides a unique tool to help redistribute big game animals from concentrated use on adjacent private lands, to a broader area of huntable public and conservation easement lands.

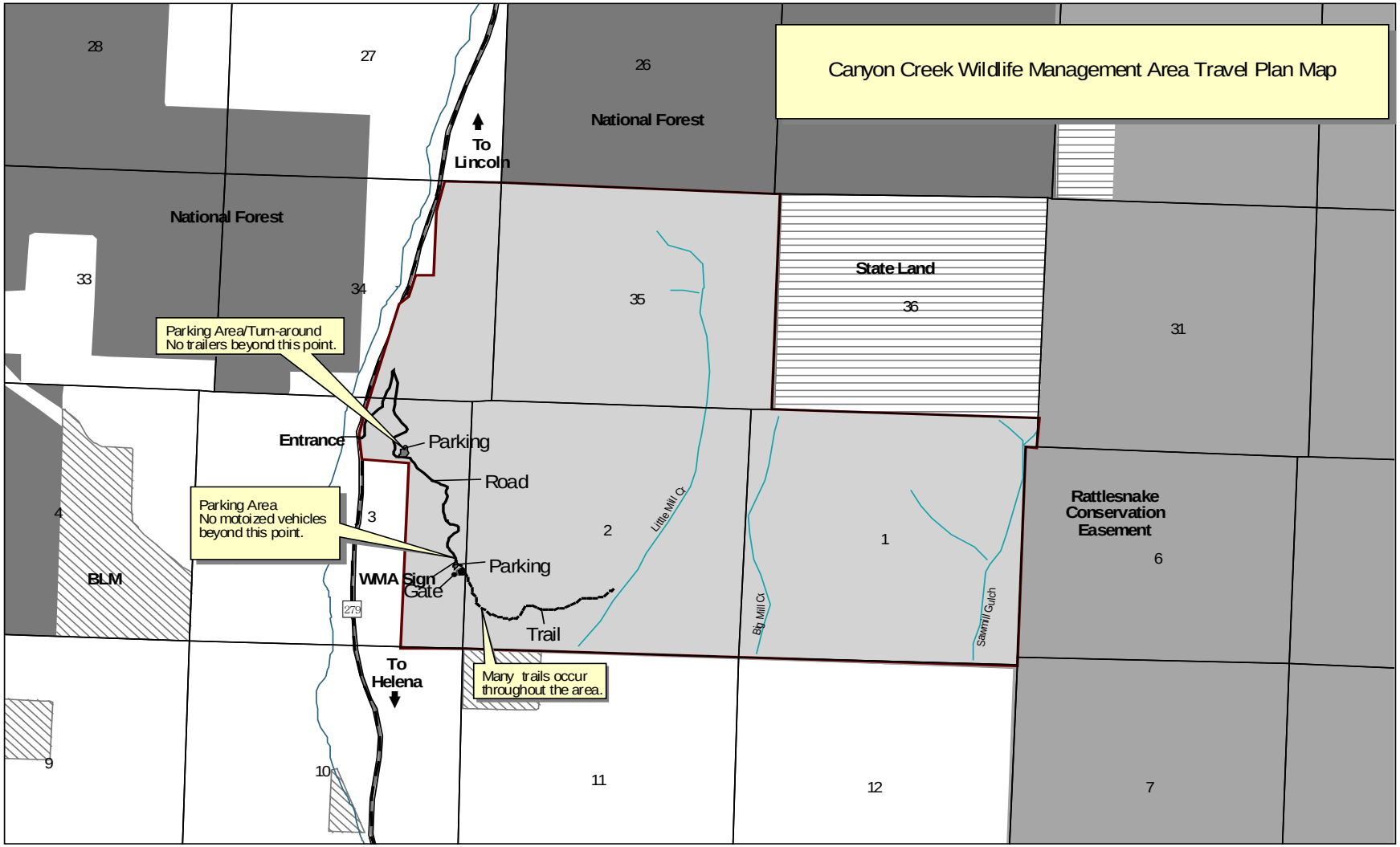
A wildlife movement corridor extends through the WMA along the Continental Divide to public lands and private conservation easement lands adjoining the WMA. Elk move between public and private lands if security is adequate. In an effort to maintain unhindered movement of wildlife, motorized use of the WMA is not allowed. Elk will move off of private lands (much of which is closed to hunting) and onto public lands and hunter-accessible private lands, ultimately resulting in improved hunter opportunities and wildlife management.

Public use (467 vehicles during the first week of the general hunting season, 1997) and interest in the area have resulted in implementation of restrictions to reduce human impacts on wildlife and their habitat. Area closure during winter and early spring and a restrictive travel plan (Figure 7) limits disturbance of wintering big game animals and reduces their movement onto adjoining private lands.

Minimal development of public facilities such as camping and parking areas and interior roads and trails is planned in order to preserve the undeveloped, primitive nature of the area. The following regulations apply to the WMA:

1. **Winter Wildlife Closure:** WMA closed to all unauthorized activities from December 1 to May 14.
2. Motor and wheeled **Vehicles** must stay on authorized roads only.
3. WMA open to **Day-Use** only.
4. **Weed Seed Free Feed** products are required.
5. **Commercial** use of the WMA is prohibited.

Thank you for your continuing support and commitment to Montana's wildlife.


Canyon Creek Wildlife Management Area Travel Plan Map
28
27
26
National Forest
To Lincoln
National Forest
33
34
35
State Land
36
31
Parking Area/Turn-around
No trailers beyond this point.
Entrance
Parking
Road
Parking Area
No motoized vehicles
beyond this point.
4
3
2
1
Little Mill Cr.
Rattlesnake Conservation Easement
6
BLM
WMA Sign
Gate
Parking
279
Trail
Big Mill Cr.
Sawmill Gulch
To Helena
Many trails occur throughout the area.
9
10
11
12
7
Bureau of Land Management
National Forest
State Lands
Sieben Conservation Easement
Canyon Creek Wildlife Management Area
This is your area to use and enjoy, but while you are here, please note the following:
1. Winter Wildlife Closure: WMA closed to all unauthorized activities from December 1 to May 14.
2. Motor and wheeled Vehicles must stay on authorized roads only.
3. WMA open to Day-Use only.
4. Weed Seed Free Feed products are required.
5. Commercial use of the WMA is prohibited.
N
Montana Fish, Wildlife & Parks

APPENDIX E: LEGAL DOCUMENTS

The following are on file in the Helena Area Resource Office in the Canyon Creek WMA file.

Warranty Deed – September 4, 1996

APPENDIX F: BASELINE INVENTORY

Canyon Creek Property – Baseline Inventory was prepared by Land and Water Consulting Inc. of Missoula subsequent to purchase of the property, in anticipation of possible exchange or sale of the property with conservation covenants attached. This 28 page document, including maps, photos, and hiding cover models (including computer program) is on file in the Helena Area Resource Office in the Canyon Creek WMA file.

APPENDIX G: TIMBER MANAGEMENT PLAN

Timber Management Plan – Canyon Creek Property, 2210 acres was prepared by Ottman Forestry Consultants Inc. of Missoula, Montana, in October 1997, subsequent to purchase of the property, in anticipation of possible exchange or sale of the property with conservation covenants attached. This 7 page document, including maps and photos of conifer forests occurring on the WMA, details how the timber on the WMA might be harvested and still retain thermal cover and hiding cover features for the area.

APPENDIX H: WORK PLAN

Annual work plans are on file in the Helena Area Resource Office in the Canyon Creek WMA file.

WORK PLAN/PROJECT DESCRIPTION

SBAS Project No.: Fiscal Year: 2003

Project Title: Canyon Creek WMA

Project Manager: Gayle Joslin

Budget Total

Number of FTEs:	Total:			
	Perm Base:		Temp Base:	0
	Perm NonBase:	0	Temp NonBase:	0

Is this a continuing project? Y Complete (YRMM):

Project Priority:

Is funded by redirected funds? N Amt Redirected: $ 0

Describe how this project relates to problems and/or strategies:
Big game distribution and their availability during the hunting season is an important aspect of elk population management in this area. The CCWMA provides an important access point not only to the WMA, but also to national forest lands and adjacent conservation easement lands for hunters. At the same time, other private lands adjacent to the WMA are closed to hunting and have resulted in concentrations of elk and unavailability during the hunting season that results in game depredation circumstances to private landowners (outside of the hunting season) who do allow hunting. Management of the CCWMA to encourage its use by elk throughout the year is integral to functional game management for this area.

What are the benefits that will result?
Opportunities to hunt and view a variety of wildlife will be improved as individual management actions promote vegetation development of the area. Hunter days spent on the WMA will increase as additional hunting opportunities are made available through increased wildlife availability. Management regulations addressing vehicle access, hunting regulations, seasons of use and others will serve to balance the increased human demands on the WMA.

List tasks to be accomplished and timeframes for completion:
Wildlife Biologist's Duties:
Annually conduct population and hunter harvest surveys for the hunting district that includes the WMA. Population surveys are conducted in the winter for elk and in the winter and spring for

mule deer. Biologists will evaluate survey data and initiate needed population and land management procedures to maintain and where possible increase wildlife on the area. Habitat work will include enforcement of restrictions on trespass livestock grazing and contract weed spraying.

Elk, deer, upland game bird harvest monitored through the Silver City Check Station - annually
Weed spraying - annually
Compile nongame and bird species lists – on-going effort
Raptor nests – on-going effort
Place boundary signs on the south boundary fence - 2003
Expand photo monitoring and GPS locate each site – 2003, then every 3 to 5 years
Evaluate and prioritize fencing needs – 2003
Develop an informational brochure for the WMA - 2004
Unique feature survey - 2004
Establish vegetation exclosures as part of the vegetation monitoring program if funding is available - 2004
Evaluate upland game bird habitat enhancement possibilities – 2006
Sensitive plant surveys – if property is ever exchanged

Regional Supervisor Approval:

Div. Administrator Approval:

END OF YEAR PROJECT REPORT / JOB PROGRESS REPORT
FY02: July 1, 2001 – June 30, 2002

Division Wildlife Region 3 SBAS Project Number
Project Title Canyon Creek Wildlife Management Area
Federal Aid Project Number _____(if Fed Aid Project)
Date Project Started 07/01/96 Ending Date on-going (or indicate if ongoing)

A. List work scheduled to be completed for this project (include performance standards from your FY01 work plan). Write either "completed", "not completed", or "partially completed" beside each item listed to indicate work actually done last FY.

List tasks from work plan:

Wildlife Biologist's Duties:

- Conduct population, habitat, and hunter harvest surveys for the hunting district that includes the WMA. Completed/On-going
- Population surveys are conducted in the winter for elk and in the winter and spring for mule deer. Completed/On-going

- Evaluate survey data and initiate needed population and land management procedures to maintain and where possible increase wildlife on the area. Completed/On-going
- Habitat work includes enforcement of restrictions on trespass livestock grazing Completed/On-going
- Contract weed spraying. Completed/Ongoing
- Monitor harvest of elk, deer, and upland game birds through the Silver City Check Station. Completed/On-going

B. Describe any variance between work scheduled and work completed and explain: (i.e., problems incurred and resulting impacts to attainment of project objectives).

No major variance between work scheduled and completed was encountered or major problems incurred during this report period.

C. Discuss impact(s) of project variance to MFWP programs (as related to objectives stated in the strategic plan, species plans or other long range documents). Also discuss any significant accomplishments of this project (state in terms of outputs produced if possible, i.e. recreation days, etc.)

- ✓ A management plan for the CCWMA was initiated.
- ✓ Meetings were held with adjacent landowner John Baucus to discuss possible unintentional use of the WMA by Sieben Ranch cattle as the Sieben Ranch initiates implementation of a rest rotation pasture system adjacent to the CCWMA.
- ✓ New Wildlife Management Area sign was installed at the upper parking area.
- ✓ A visitor use Roster Box was installed at the lower parking area.
- ✓ A metal gate and wooden jack-leg fence have been installed at the upper parking areas.
- ✓ Upper and lower parking areas, turn-around area, and the road have been graded.
- ✓ Weed spraying has been conducted annually with a boom sprayer since 1999, and has been successful in substantially reducing the infestation of knapweed, Canada thistle, and mullein along roadways.
- ✓ Livestock have been restrained from entering the WMA in an effort to allow stream banks to stabilize, and improvements are now becoming visible after 6 years. Trespass cattle did occur on the WMA in 2001 from the Lyons Creek Conservation Easement when Rick Dean contracted pasture from Andersons and did not keep track of the cattle. His contract was terminated by Anderson's.
- ✓ Photo points have been established on the WMA. Additional work to quantify all locations will be made in 2003
- ✓ Thermal cover analysis has been conducted for the WMA.
- ✓ Timber management plan recommendations were provided for the WMA

REFERENCES

Dutton, B. 1998. Canyon Creek Property – Baseline Inventory. May 1998. Land and Water Consulting Inc., P.O. box 8254, Missoula, MT 59807 Project #S96-015T4 52pp.

Fisher, F.B., J.C. Winne, M.M. Thornton, T.P. Tady, Z. Ma, M.M. Hart, and R.L. Redmond. 1998. Montana land cover atlas. Unpublished report. Montana Cooperative Wildlife Research Unit, University of Montana, Missoula. viii + 50 pp.

Hydrometrics, Inc. 1996. Phase I Environmental Assessment of the Sieben Ranch Mill Creek Property. Prepared for Montana Department of Fish, Wildlife and Parks.

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Perry, E.S. 1986. Montana in the Geologic Past. Montana Bureau of Mines and Geology, Montna College of Mineral Science and Technology. Reprint 5. 78pp.

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[WMA\CanyonCr\CanyonCrMgmtPlan2002]